

Curriculum Vitae



Name: Olafusi Celestina Oluwaseun

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Passport Number: B05248190

Nationality: Nigerian

Date of birth: 29/12/1998

EDUCATION AND TRAINING

2024-Till Date: PhD Biochemistry (In view)

- Thesis: Comparative Microbiome and Immune Profiling of Midgut and Salivary Glands in *Plasmodium*-Infected and Uninfected *Anopheles gambiae*
- University: Covenant University, Ota, Ogun State, Nigeria
- Class of Degree: First Class Honors (5.0/5.0 Coursework)

June 2021 – June 2023: MSc. Molecular Biology and Genomics

- Thesis: Evaluation of central repeats and haplotypes on the *Plasmodium falciparum* circumsporozoite gene in isolates obtained from Ore, Osun State, Nigeria
- University: Redeemer's University, Ede, Osun State, Nigeria
- Class of Degree: Distinction (77%)

September 2015 – December 2019: BSc. Biochemistry

- Thesis: Effect of African walnut (*Tetracarpidium conophorum*) seed oil on 3-methylcholanthrene-induced mammary carcinogenesis and expression of COX-2 and PPAR-gamma in female Wistar rats
- University: Ondo State University of Medical Sciences, Laje, Ondo City, Ondo State, Nigeria
- Class of Degree: First Class Honors (4.58/5.0)

RESEARCH EXPERIENCE

April 2026 – June 2026: ICIPE PhD Research Fellow

- Institute: International Centre for Insect Physiology and Ecology, Nairobi, Kenya
- Description: Rearing mosquitoes in an insectary lab, morphological and molecular identification of mosquito species, dissection, DNA/RNA extraction, *Plasmodium* infection status detection using mic PCR, speciation, sequencing.

October 2024 – May 2026: PhD Research Fellow

- Institute: CApIC-ACE, Covenant University, Ota, Ogun State, Nigeria
- Description: Work in an insectary lab with *Anopheles* species mosquitoes, perform collection, handling, and tissue dissections. Maintain mosquito colonies, prepare and preserve samples for molecular analysis, and assist with infection assays. Conduct literature reviews and data synthesis on mosquito-microbiota-*Plasmodium* interactions to inform experimental design.

September 2025 - October 2025: PhD Research Intern

- Institute: Teady Bioscience Research Laboratory, Ilaramokin, Ondo State, Nigeria.
- Description: Trained in *Drosophila* rearing, phenotyping, and molecular analysis. Assisted in experimental

design exploring host immune responses and microbiome dynamics. Developed understanding of how *Drosophila* models inform studies in mosquito immunity and *Plasmodium*–vector interactions.

2023-2024: Research Scientist

- Institute: Centre for Molecular Biology and Medical Genomics, Ondo State University of Medical Sciences, Nigeria
- Description: Collaborated with a multidisciplinary team investigating epigenetic determinants of dizygotic twinning in Nigeria, performing DNA methylation profiling via ELISA to quantify global methylation levels and assess potential regulatory modifications associated with twin conception.

2021-2023: MSc Research Fellow

- Institute: Institute of Genomics and Global Health, Redeemer's University, Ede, Osun State, Nigeria
- Description: Acquired hands-on expertise in molecular biology and genomics techniques, including the extraction and purification of high-quality DNA and RNA, quantification of nucleic acids, gene expression assays, and ELISA techniques. Skilled in PCR methodologies (conventional, multiplex, and nested PCR) and Sanger sequencing for targeted gene analysis. Proficient in bioinformatics tools for sequence assembly, alignment, and annotation, including Geneious Prime and BioEdit, enabling analysis of genomics data for functional interpretation.

2020-2021: Graduate Research Assistant and Data Analyst

- Institute: Centre of Excellence in Reproductive and Health Innovation (CERHI), University of Benin, Edo State, Nigeria
- Description: Collaborated with a multidisciplinary team investigating genetic, environmental, and lifestyle risk factors contributing to male infertility in Africa. Assisted in in vitro fertilization (IVF) procedures at a Human Assisted Reproductive Laboratory, gaining hands-on exposure to gamete handling and embryology workflows during the one-year compulsory National Youth Service Scheme. Conducted field data collection and applied statistical analyses using SPSS and GraphPad Prism to evaluate associations between clinical, demographic, and laboratory variables, supporting evidence-based conclusions on male reproductive health.

2019-2020: Graduate Research Intern

- Institute: Dr. Omotuyi's Molecular Biology Research Laboratory
- Description: Performed DNA extraction from diverse biological samples to obtain high-quality nucleic acids for downstream molecular analyses. Conducted ELISA assays to quantify specific biomolecules, applying standardized protocols for accurate detection and interpretation of target analytes.

2018-2019: Laboratory Scientist Intern

- Institute: Ondo State University of Medical Sciences Teaching Hospital, Akure, Ondo State, Nigeria
- Description: Performed a range of clinical laboratory assays across the Chemical Pathology, Microbiology, and Hematology departments, including biochemical tests (fasting blood glucose, creatinine, electrolytes), infectious disease diagnostics (malaria and typhoid testing), urinalysis and stool analysis, serological assays (pregnancy testing), and hematological evaluations (blood grouping, genotype determination, and packed cell volume). Ensured accurate sample handling, assay execution, and interpretation of results in accordance with standard laboratory protocols.

WORK EXPERIENCE

October 2023 – Till Date: Assistant Lecturer

- Organization: Ondo State University of Medical Sciences, Laje, Ondo City, Ondo State, Nigeria
- Job Description: Teaching undergraduate Biochemistry courses, supervising final-year research projects, conducting practical demonstrations, grading assessments/examinations, and contributing to departmental research and curriculum development.

March 2021 – September 2023: Graduate Assistant

- Organization: Ondo State University of Medical Sciences, Laje, Ondo City, Ondo State, Nigeria

- Job Description: Assisted in delivering tutorials and laboratory practical, prepared reagents and equipment, supervised practical sessions, marked assignments/quizzes, supported research data collection, and invigilated examinations.

PEER-REVIEWED PUBLICATIONS

- Okonofua, F. E., Ntoimo, L. F. C., Msagati, T. A. M., Ayodeji, O., Aziken, M., Omonkhua, A., Ohenhen, V., Olafusi, C., & Alfred, M. O. (2025). Association Between Antibiotic Exposure and the Risk of Male Infertility: A Case–Control Study. *Journal of Xenobiotics*, 15(5), 172. <https://doi.org/10.3390/jox15050172>
- Okonofua, F. E., Ntoimo, L. F. C., Unuabonah, E. I., Msagati, T. A. M., Ayodeji, O., Aziken, M., Omonkhua, A., Ohenhen, V., Olafusi, C., & Alfred, M. O. (2024). Association of Urinary Mycotoxins with Sperm Quality: A Case-Control Study in Southern Nigeria. *Toxins*, 16(3), 119. <https://doi.org/10.3390/toxins16030119>
- Okonofua, F. E., Ntoimo, L. F. C., Unuabonah, E., Msagati, T. A. M., Ekwo, M. C., Ayodeji, O. F., ... & Alfred, M. O. (2024). Association Between Urinary Parabens and Sperm Quality in Nigerian Men: A Case–Control Study. *International Journal of General Medicine*, 2767-2779. <https://doi.org/10.2147/IJGM.S461367>
- Okonofua, F.E., Ntoimo, L.F.C., Omonkhua, A., Ayodeji, O., Olafusi, C., Unuabonah, E., & Ohenhen, V. (2022). Causes and Risk Factors for Male Infertility: A Scoping Review of Published Studies. *International Journal of General Medicine*, 15, 5985-5997. <https://doi.org/10.2147/IJGM.S363959>

MANUSCRIPT IN PREPARATION

- Celestina Olafusi, Olubanke Ogunlana. and Aanoluwapo Salemcity. Influence of the Microbiota on *Plasmodium falciparum* Sporozoite Development in *Anopheles* Mosquitoes: A systematic review with emphasis on the salivary gland microbiome. PROSPERO 2025 CRD420251119955. Available from <https://www.crd.york.ac.uk/PROSPERO/view/CRD420251119955>

BOOK CHAPTERS SUBMITTED

- Ogunlana, O.O., Olafusi, C.O., Micheal, A.I., Bajepade, T.I., Oluwatobiloba, H.G., Enoma, D. & Mishra, R. (2026). Fundamentals of biosensor technology for food quality and safety. In Biosensor-Enabled Smart Packaging for Real-Time Food Monitoring. Apple Academic Press.
- Ogunlana, O.O., Orogun, Y.G., Bajepade, T.I. & Olafusi, C.O. (2026). Global regulations, guidelines, and policy frameworks for PFAS management. In Safety Assessment of PFOA and PFOS: Toxicology, Regulation, and Risk Mitigation. Bentham Science Publishers.

HONOURS AND AWARDS

- AGNES Mobility Intra-Africa Travel Grant Award Recipient
- 3rd Best Oral Presenter at the Humboldt Research Hub-Centre for Emerging and Re-Emerging Infectious Disease (HRH-CERID) International Conference 2025 Themed ‘The Intersection of Genomics, One Health, and Climate Change in Emerging Disease Control’ held at LAUTECH, Ogbomoso, Nigeria
- Travel Fellowship Award Recipient at the Humboldt Research Hub-Centre for Emerging and Re-Emerging Infectious Disease (HRH-CERID) International Conference 2025 Themed ‘The Intersection of Genomics, One Health, and Climate Change in Emerging Disease Control’ held at LAUTECH, Ogbomoso, Nigeria
- Travel Fellowship Award Recipient at the 3rd Nigerian Bioinformatics and Genomics Network International Conference 2025 Themed ‘Harnessing Bioinformatics and Genomic Science for Sustainable Development in Africa’ held at BOWEN University, Iwo, Osun State, Nigeria
- CApIC-ACE Research Fellow Award (2024), Covenant University, Ota, Ogun State, Nigeria

- 2nd Best Research Paper Award at the Faculty of Basic Medical Sciences Conference 2024 held at the Ondo State University of Medical Sciences, Ondo City, Ondo State, Nigeria
- Overall Best graduating MSc Student Award (2023) in Molecular Biology and Genomics (Redeemer's University) (September 2023)
- Overall Best Graduating Student Award (2019) at the Ondo State University of Medical Sciences, Laje, Ondo City, Ondo State, Nigeria.
- Best student of the year Award (2018 and 2017) at the Ondo State University of Medical Sciences, Laje, Ondo City, Ondo State, Nigeria

MEMBERSHIP OF PROFESSIONAL BODIES

- Member, Nigerian Bioinformatics and Genomics Network (ID: 2500350)

REFERENCES

Available on Request